

# Creating new tests for Lmod

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# Outline



- ▶ Showing how to create a test for Lmod
- ▶ Tclmodule test
- ▶ New Principal: An unload cannot fail!
- ▶ An intel module failing on unload
- ▶ Break on unload?
- ▶ Future Topics

# A Tclmodule test

- ▶ A user reported that there was an extra space from a TCL modulefile
- ▶ This calls for a new test
- ▶ The following slides outline the steps

# Create a new tclmodule test

- ▶ Create directory `rt/tclmodule/mf`
- ▶ Create a new tcl file `a/1.0`

```
%Module
```

```
global env
set home $env(HOME)
set pkg "$home/foo"
prepend-path PATH $pkg/bin
setenv FOO_DIR $pkg
```

```
module-whatIs "This $pkg"
```

# Create a tclmodule.tdesc

- ▶ Copy rt/nvv/nvv.tdesc to rt/tclmodule/tclmodule.tdesc
- ▶ Edit to fit
- ▶ Add steps
- ▶ Test tclmodules
- ▶ update \*.txt files
- ▶ run all tests
- ▶ update \*.txt files when necessary

```
runScript = [[  
    . $(projectDir)/rt/common_funcs.sh  
  
    unsetMT  
    initStdEnvVars  
    export MODULEPATH=$(testDir)/mf  
  
    rm -fr _stderr.* _stdout.* err.* out.* .lmod.d  
  
    runLmod --version                # 1  
    runLmod whatis a                 # 2
```

# How to validate new test

- ▶ tcl2lua.tcl mf/a/1.0
- ▶ There is an extra space

```
tcl2lua.tcl mf/a/1.0
prepend_path"PATH", "/Users/mclay/foo/bin", delim=":", priority="0"
setenv("FOO_DIR", "/Users/mclay/foo")
whatis([==[This /Users/mclay/foo ]==])
```

# Change tcl2lua.tcl to use trimright

- ▶ The Tcl version appends the args together w/ a space
- ▶ Need to trim the trailing space

```
proc module-whatIs { args } {  
    global g_outputA  
    set msg ""  
    foreach item $args {  
        append msg $item  
        append msg " "  
    }  
  
    regsub -all {[\n]} $msg " " msg2  
    set msg2 [string trimright $msg2] # <=== add this line  
    lappend g_outputA "whatIs(\[==\[ $msg2 \]==\])\n"  
}
```

# Run all tests

- ▶ Problems with tests: `ck_mtree_syntax` and `softwarePage`
- ▶ Show diffs
- ▶ update \*.txt gold files



# New Principal: Unload can never fail

- ▶ A TACC colleague pointed out this problem
- ▶ In trying to unload a module it failed
- ▶ It has never been reported to me before
- ▶  $\Rightarrow$  module unload should *never* fail

```
% ml init_opensl/2021.4.0
% unset INTELFPGAOCCLSDKROOT
% ml -init_opensl/2021.4.0
Lmod has detected the following error:
/scratch1/projects/compilers/oneapi_2021.4.0.3422/modulefiles/init_opensl/2021.4.0:
(init_opensl/2021.4.0): can't read "::-env(INTELFPGAOCCLSDKROOT)": no such variable
```

# Future Topics

- ▶ Write one new test.
- ▶ Explain how Mname object converts names into a filename.
- ▶ More internals of Lmod?